

Building Healthier Societies through Partnership



International Federation of Pharmaceutical Manufacturers Associations

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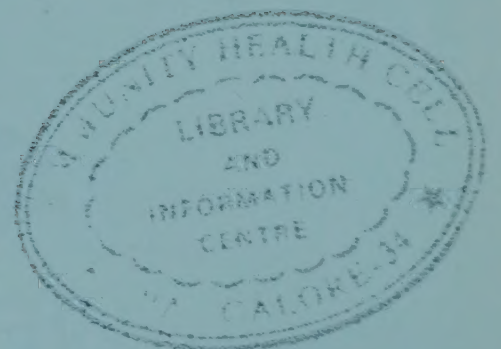


Table of Contents

Building Healthier Societies Through Partnership	5
---	----------

Partnerships by Disease / Condition:

HIV/AIDS	6
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Abbott Access to HIV Care	6
Academic Alliance for AIDS Care and Prevention in Africa	6
Accelerating Access Initiative (AAI)	6
African Comprehensive HIV/AIDS Partnerships (ACHAP)	7
Cambodia Treatment Access Project	7
Diflucan® Partnership Program	8
Enhancing Care Initiative (ECI)	8
Gilead Access Program	8
GlaxoSmithKline's Positive Action on HIV/AIDS	9
Infectious Diseases Institute	9
Inter-Company Collaboration on AIDS Drug Development (ICCADD)	10
International AIDS Vaccine Initiative (IAVI)	10
PMTCT Donations Program	10
Secure the Future	11
Share	11
Step Forward...for the World's Children	12
Tanzania Care	12
Viramune® Donation Program	12

MALARIA	14
----------------------	-----------

ACCESSS	14
Artekin® International Development Program	14
GSK African Malaria Partnership	14
Impact Malaria	15
JPMW Alliance (Japanese Pharmaceutical Companies, Ministry of Health, Labor and Welfare (MHLW) and World Health Organization (WHO)	15
LAPDAP Antimalarial Drug Development	15
Malaria Vaccine Initiative (MVI)	16
Medicines for Malaria Venture (MMV)	16
Multilateral Initiative of Malaria (MIM)	17
Novartis Coartem®	17
Roll Back Malaria Global Partnership (RBM)	18

TUBERCULOSIS	19
Bangalore Research Institute	19
Global Alliance for TB Drug Development (TB Alliance)	19
Helping the Red Cross in the Fight against TB	20
Lilly MDR-TB Partnership	20
Novartis Institute for Tropical Diseases (NITD)	21
Novartis TB DOTS Donation	21
Stop TB Partnership	21
TB Free	22
TROPICAL DISEASES	23
Bayer Dengue Fever Health Campaign	23
Global Alliance to Eliminate Leprosy (GAEL)	23
Global Alliance to Eliminate Lymphatic Filariasis (GAELF)	24
Guinea Worm (Dracunculiasis) Eradication Program (GWEP)	24
International Trachoma Initiative (ITI)	25
Merck MECTIZAN® Donation Program (MDP)	25
Singapore Dengue Consortium	26
Sleeping Sickness Program	26
VACCINE-PREVENTABLE DISEASES	27
Global Alliance for Vaccines and Immunization (GAVI) & the Vaccine Fund (VF)	27
Global Polio Eradication Initiative	27
Influenza Vaccine Supply International Task Force	28
Leishmaniasis Vaccine Initiative (LVI)	28
Merck Vaccine Network - Africa (MVN-A)	29
Pediatric Dengue Vaccine Initiative (PDVI)	29
ADDITIONAL HEALTH INITIATIVES	30
Examples of Individual Health Initiatives by Company	30

Building Healthier Societies Through Partnership

The Millennium Development Goals commit the international community to an expanded vision of development, one that vigorously promotes human development as the key to sustaining social and economic progress in all countries, and recognizes the importance of creating a global partnership for development.

The pharmaceutical industry is actively contributing to building this global partnership by means of initiatives and projects such as those presented in this publication.

Tackling the health status of the poorer populations in developing countries presents national governments, international organisations and civil society organisations with a complex problem that requires a far larger-scale mobilisation of resources, capacities and skills than either the public or the private sector alone can provide.

The organisational response to this complexity is increasingly to be found in the Public-Private Partnership formula. Based on the principles of mutual trust and respect, shared objectives and responsibilities as well as a true, long-term commitment, Public-Private Partnerships enable partners with different, often divergent philosophies and missions to work together to achieve one common goal – to *build healthier societies*.

In recent years, partnerships have become a distinctive feature of the healthcare landscape in developing countries. Carrying the burden of some of the world's most fatal diseases and conditions on one hand, and facing the shortage or lack of essential goods and services on the other, these countries need very broad health interventions, which, experience has shown, can only be delivered through multi-sector partnerships.

Pharmaceutical industry partnerships cover a wide field. At their core is the provision of medicines under non-market conditions. However for this core involvement to take root and produce better health outcomes the industry is also and increasingly involved in basic health education and behavioural change, training of personnel, prevention campaigns, establishing and organising treatment distribution systems, building

delivery and healthcare infrastructure. Partnerships are also increasingly focused on developing new medicines and vaccines targeting the specific health needs of developing countries. Overall, partnerships in all their many forms today have a considerable impact on the healthcare systems of the countries targeted by the Millennium Development Goals.

The contribution of pharmaceutical companies to different health initiatives targeting developing countries now constitutes a major component of the entire resource flow provided by the global community. Since 1998, ten major companies in membership of the Partnership for Quality Medical Donations (PQMD) have donated products worth \$2.7 billion, which constitute only a portion of total contributions made by the pharmaceutical industry.

This new IFPMA publication reviews all major health partnerships and programs initiated by pharmaceutical companies and in which they play an important role. They have often not only provided the required strategic resources, but have also acted as integrators, bringing together players from different environments and settings, both at the global and local level, to ensure that the targeted health problem can be properly addressed.

This publication, although it is not an exhaustive catalogue of all health programs managed by the pharmaceutical industry, does cover most of the major initiatives currently being undertaken in developing countries. The short descriptions of each partnership provide a general overview of objectives and achievements but cannot do justice to the organisational, economic and even political complexity that lies behind each of them. Millions of patients on all continents have benefited from these partnerships some of which have set the highest standard of practice and an example for others to follow.

The very essence of any partnership is that it can only succeed through a collaborative effort on the part of all those able to make a contribution to that end. The pharmaceutical industry will continue to play its part in moving the Millennium Development Goals forward towards their achievement by making a sustained contribution towards *building healthier societies*.

HIV/AIDS

The HIV/AIDS epidemic has spread with ferocious speed. Virtually unknown 20 years ago, HIV has infected more than 60 million people worldwide. Each day, approximately 14,000 new infections occur, more than half of them among young people below age 25. At the end of 2003, of over 40 million people living with HIV/AIDS (PLWHA), 30 percent were co-infected with tuberculosis (TB). Over 95 percent of PLWHA are in low and middle-income countries. More than 20 million have died from AIDS, 3 million in 2003 alone. AIDS is now the leading cause of death in Sub-Saharan Africa and the fourth-biggest killer globally. The pharmaceutical industry has already developed and made 23 HIV medicines available since 1987, and more than 80 new medicines against HIV are in development.

ABBOTT ACCESS TO HIV CARE

Launched in 2001, Abbott Access provides the company's HIV products to 68 developing countries, including all of Africa. Through Abbott Access, the company offers two protease inhibitors, Kaletra and Norvir, at a loss to **Abbott Laboratories**. Determine[®] HIV, a rapid test for HIV antibodies, is also provided at no profit as part of the program. Abbott Access is available to any organization or institution in these countries that provides products to patients as part of a sound and sustainable program of care. This includes governments, NGOs, United Nations organizations, other national and international health institutions, private employers, private hospitals and clinics, as well as other possible providers. Affordability of HIV medication is just one of the many components involved in addressing the devastation of the AIDS pandemic in developing countries. It is hoped that this initiative, along with those of other companies, will encourage governments and other sources of international funding to help develop the infrastructure necessary to ensure broader availability of antiretroviral treatment and care for people living with HIV/AIDS in developing countries. To learn more about the initiative, please visit www.accesstohivcare.org/

ACADEMIC ALLIANCE for AIDS CARE and PREVENTION in AFRICA (AAACP)

The Academic Alliance for AIDS Care and Prevention in Africa is a union of African and Western infectious disease experts that built (in early 2002) the first large-scale HIV/AIDS clinic in Africa for training medical personnel on treatment options, established with support from **Pfizer**. The construction of the new Infectious Diseases Institute, located at the Makerere University Medical School in Kampala, Uganda, one of the leading medical schools in Africa, is funded by the **Pfizer Foundation** and operated by the Alliance in

partnership with the university. The Alliance is working closely with the Ugandan medical and public health community and will actively seek assistance from the Ugandan Minister of Health, local organizations, the staff and faculty of Makerere University Medical School and Mulago Hospital, the national hospital of Uganda. The institute has already trained 80 doctors from the region in HIV/AIDS care and provided state-of-the-art care for about 600 patients. Clinical research will also be conducted. For more information, please visit the website of the Alliance: www.aaacp.org/

ACCELERATING ACCESS INITIATIVE (AAI)

The Accelerating Access Initiative (AAI) is a cooperative endeavor of UNAIDS, the World Health Organization, UNICEF, the UN Population Fund, the World Bank, and seven research-based pharmaceutical companies (**Abbott Laboratories, Boehringer Ingelheim, Bristol-Myers Squibb, GlaxoSmithKline, Gilead Sciences, Merck & Co., Inc. and F. Hoffmann-La Roche**). Participants in AAI are committed to working with governments, international organizations, and other stakeholders to find ways to broaden access while ensuring rational, affordable, safe and effective use of drugs for HIV/AIDS-related illnesses.

While it is widely recognized that affordability is just one of the many issues to access, the companies, individually, have offered to substantially improve access to, and the availability of, a range of medicines by providing more affordable prices in developing countries. These efforts are bearing fruit. More than 80 countries have signaled to the UN agencies that they plan to implement HIV treatment programs and wish to collaborate with the AAI. Of these countries, 49 already have national plans in place and have reached agreement on prices with the individual companies

concerned. By June 2003, the number of people in Africa receiving treatment under the AAI was eight times higher than when the program began in 2000 and stood at roughly 75,000. By March 2004, the number of treatments delivered by the AAI in Africa doubled, reaching more than 150,000 patients.

AFRICAN COMPREHENSIVE HIV/AIDS PARTNERSHIPS (ACHAP)

The Merck/Gates/Botswana Partnership for HIV/AIDS (also known as the African Comprehensive HIV/AIDS Partnerships or ACHAP), was established in 2000 by the Government of Botswana, The **Merck Company Foundation/Merck & Co., Inc.** and the Bill & Melinda Gates Foundation to support and enhance Botswana's response to the HIV/AIDS epidemic through a comprehensive approach to prevention, care, treatment and support. The Merck Company Foundation and the Gates Foundation each are contributing \$50 million to the initiative. In addition, Merck is donating its antiretroviral (ARV) medicines to Botswana's national ARV therapy program – known as *Masa* (or “new dawn”) – for the partnership's duration.

Among other things, the Merck/Gates/Botswana partnership:

- Supports Botswana's National AIDS Coordinating Agency by providing assistance with strategic planning and epidemiological planning;
- Works to strengthen the nation's health care infrastructure, promote behavior change and destigmatize HIV/AIDS;
- Provides grants to community and faith-based organizations to support grassroots efforts to tackle HIV/AIDS at the local level.

With each and every project the partnership supports, efforts are made to ensure that programs are locally owned and driven, sustainable and promote local capacity. While reducing the impact of HIV/AIDS will not happen overnight, early results from Botswana are promising. Today, *Masa* is the largest government-sponsored HIV/AIDS treatment program on the African continent. As of March 2004:

- More than 25,000 patients were enrolled in the program;
- More than 15,000 patients indicated for therapy were receiving medications;
- Proportionately more women were receiving ARV treatment than men – by a 3 to 2 ratio;

- Approximately 1,000 new HIV+ patients each month are being enrolled in the program.

To expand this reach, the partnership is supporting the construction of 32 regional treatment centers – 12 are currently operational – to be completed by the end of 2004. The partnership also is working to prevent HIV/AIDS through disease awareness and destigmatization education for teachers representing nearly 70 percent of the nation's primary and secondary-level schools and to provide confidential pre- & post-HIV test counseling, disease information and support for AIDS orphans through community-based centers.

Most importantly, partnership programs are enhancing local capacity by strengthening health care infrastructure and transferring technical skills. To support *Masa*, the partnership has supported the development of laboratory capacity to test and monitor patients' blood. Information technology systems also are being developed to track patient adherence. At the same time, a didactic training course is providing all health care professionals in Botswana the opportunity to enhance their knowledge in HIV/AIDS clinical care, while more than 1,000 health care workers have received hands-on, clinic-based training from HIV/AIDS experts through the partnership's clinical preceptorship program.

The strength of the partnership lies in its full integration with government strategy and its ability to harness private-sector expertise in support of public-sector goals. Success to date demonstrates the importance of public/private partnerships in the fight against HIV/AIDS. As lessons are documented, the partnership's process and content will inform and guide others similarly committed to reducing the human and economic impact of HIV/AIDS. To learn more about the partnership and its programs, please visit: www.achap.org

CAMBODIA TREATMENT ACCESS PROJECT (CTAP)

The aim of the Cambodia Treatment Access is to widen access to sustainable HIV healthcare, including anti-HIV (antiretroviral) therapy in this country. The project specifically aims to increase the access to HIV care, conduct research, and train healthcare professionals in Cambodia where the adult prevalence of HIV is estimated to be the highest in Asia. **Roche** financially supports the project, which was launched

HIV/AIDS

in September 2003, in an alliance formed between the company and the Government of Cambodia, particularly the Ministry of Health and the National Centre in HIV Epidemiology and Clinical Research at the University of New South Wales, Australia.

The emphasis of the program will be on wider use and the understanding of the therapeutic value and cost effectiveness of antiretroviral treatment delivered by outpatient services in both Cambodia's capital, Phnom Penh and in a provincial town.

In addition to providing the funding, HIV therapy and HIV viral load tests, support from Roche will ensure that the outputs gained are clearly documented to support advocacy for additional resources for antiretroviral provision. All partners are committed to the public dissemination of the results, so that the learnings may be of benefit to others.

DIFLUCAN® PARTNERSHIP PROGRAM

Pfizer is collaborating with governments and non-governmental organisations (NGOs) to donate its antifungal medicine, Diflucan® (fluconazole), to HIV/AIDS patients in the developing countries hardest hit by HIV/AIDS. Although not a cure for HIV/AIDS, Diflucan® is efficacious in treating two AIDS-related opportunistic infections: cryptococcal meningitis and oesophageal candidiasis. Through the Diflucan® Partnership Program, Pfizer is providing the medicine free of charge and without time limits to public health clinics for distribution to patients. Partners include Axios International, Interchurch Medical Assistance, and the International Association for Physicians in AIDS Care (IAPAC).

As of July 2004, Pfizer had donated more than 4 million free doses of Diflucan® to governments and NGOs operating at 915 sites in 23 countries, in Africa, Asia, the Caribbean and Latin America, and treated more than 87,000 patients. More than 18,000 health care providers have been trained through IAPAC in the countries participating in the program.

Please visit www.diflucanpartnership.org for further information.

ENHANCING CARE INITIATIVE (ECI)

Launched in 1998 with a five-year, \$5 million grant from the **Merck Company Foundation**, the Enhancing Care Initiative is a program of the Harvard AIDS Institute and the Francois-Xavier Bagnoud Center

at the Harvard School of Public Health. ECI is a multidisciplinary, multinational collaboration that seeks improvements in the care of people living with HIV/AIDS in resource-limited settings. Its purpose is to identify practical, country-led approaches to providing effective HIV/AIDS care tailored to the needs and resources of each country.

Currently, teams are active in Brazil, Senegal, South Africa (KwaZulu-Natal province) and Thailand. In Brazil, for example, the ECI team has worked closely with local government and NGOs to improve health care for women living with HIV/AIDS and reduce rates of mother-to-child transmission. The team's work has led to better integration of reproductive health services within HIV/AIDS care, including enhanced voluntary HIV counseling and testing. In Senegal, the team has identified several priorities for addressing HIV/AIDS, including increased access to HIV counseling, testing and treatment, expanded programs to reduce mother-to-child transmission, and training for health care workers. The team is also working closely with Senegal's National AIDS Control Program to identify cost-effective ways to improve care for semi-urban and rural populations. Team members in South Africa have focused on expanding specialized HIV/AIDS training among local health workers.

The team also has worked to promote increased access to HIV counseling and testing and home-based care for people living with HIV/AIDS. In August 2003, the South African Government approved the receipt of funds allocated to the ECI KZN team from the Global Fund to Fight AIDS, Tuberculosis, and Malaria. The ECI team, working with the KZN provincial Department of Health and other key stakeholders, will assist in developing and implementing a comprehensive HIV/AIDS strategy and strengthening health care capacity to scale-up delivery of antiretroviral therapy. In Thailand, the ECI team has focused on leveraging existing health institutions, training care providers, and building capacity at the community level to enhance quality of life and access to care for people living with HIV/AIDS. For more information, please visit www.eci.harvard.edu

GILEAD ACCESS PROGRAM

The Gilead Access Program is an initiative of **Gilead Sciences**, a U.S.-based biopharmaceutical company, to expand access to its once-daily anti-HIV medicine, Viread® (tenofovir disoproxil fumarate).

The company has developed the Gilead Access Program to make Viread® available to the broadest possible range of people living with HIV in resource-challenged countries.

The Gilead Access program has four main components, each designed to help build sustainable approaches to improving access to Gilead therapies in developing nations:

- Sale of drug at no profit in all fifty-three countries of Africa and in 15 other nations classified as “least-developed” by the United Nations;
- Simplified purchasing in which Gilead Sciences will provide Viread® directly to treatment programs, avoiding expensive intermediaries or “middlemen”;
- Information and guidance to programs seeking access to Viread®;
- Research to optimize HIV treatment strategies, through clinical trials that help to define the best methods for delivering anti-HIV therapy in resource-challenged settings.

Gilead Access Program is open to any organization operating HIV treatment programs in these countries, including governments, non-governmental organizations, employers, United Nations agencies, hospitals, and clinics. Any organization operating HIV treatment programs in these countries can request access to reduced-price Viread®, including governments, non-governmental organizations, employers, UN agencies, hospitals and clinics. The reduced price represents no profit to Gilead Sciences. For more information, please visit the website of the program at: www.gileadaccess.org

GLAXOSMITHKLINE'S POSITIVE ACTION ON HIV/AIDS

Positive Action is GlaxoSmithKline's twelve year-old partnership programme supporting community groups around the world who are fighting HIV/AIDS on the frontlines. Working with the most creative and effective grass-roots projects where AIDS is hitting hardest, Positive Action helps communities help themselves. During 2003, Positive Action supported 39 international programmes in partnership with 28 community-based organisations in 34 countries. Positive Action focuses support on capacity building programs which provide community-based organizations with strategic management, leadership, advocacy, fundraising and communication skills, facilitating delivery of more effective and sustainable healthcare

services and promotion of human and healthcare rights to improve the quality of lives of people living with HIV/AIDS.

Positive Action complements other GSK initiatives such as the **GSK France Foundation** that is active in addressing HIV/AIDS in the developing world with an emphasis on Francophone Africa. Over the last 5 years, the Foundation has supported 32 programs in 13 African countries. The Foundation supports three main areas of HIV education, care and treatment: minimizing the risk of vertical transmission of HIV; providing medical care, monitoring and treatment for adults and children; and improving access to care and quality of care for people living with HIV. The Foundation aims to reach over 200,000 people, providing voluntary counseling and testing facilities and appropriate care and treatment services. To learn more about GSK's HIV/AIDS community initiatives visit <http://corp.gsk.com/positiveaction/>



INFECTIOUS DISEASES INSTITUTE

In recognition of the growing need of African health care professionals for training in the latest treatment options for HIV/AIDS, **Pfizer** and the **Pfizer Foundation** have helped to establish the new Infectious Diseases Institute (IDI). Located at Makerere University Medical School in Kampala, Uganda, the IDI is a regional treatment and training institute intended to strengthen local capacity in HIV/AIDS care. The Institute is the first substantial infrastructural component to be added to Makerere University's Medical School in 35 years.

Pfizer has partnered with the Academic Alliance for AIDS Care and Prevention (an association of African and North American infectious disease experts) and several non-governmental organizations (including the Academic Alliance Foundation, the Pangaea Global AIDS Foundation, the Infectious Diseases Society of

America, and the AIDS Support Organization (TASO) in Uganda) to establish the new clinic, which is funded by Pfizer and operated by the Academic Alliance in partnership with Makerere University. The IDI provides high-quality HIV/AIDS care and treatment to thousands of patients each year, and trains health care professionals from throughout Africa.

Since its establishment in 2002, the IDI has trained approximately 150 doctors from throughout the region in HIV/AIDS care, and is following approximately 4,000 patients. Institute staff will also conduct operational research. For more information, please visit the website of the Alliance at www.aaacp.org

INTER-COMPANY COLLABORATION on AIDS DRUG DEVELOPMENT (ICCADD)

The Inter-Company Collaboration on AIDS Drug Development is a long-term initiative in Africa supported by **Merck & Co., Inc.** that assists with meeting medical training needs. The initiative is the first of its kind and sponsors physicians for an intensive one to four week HIV/AIDS training program in France. In partnership with the Institut de Médecine et Epidémiologie Africaines at the Bichat Hospital and Institut Fournier in Paris, the program encourages participants, most of whom are members of their national AIDS control programs, to organize and conduct local training sessions to educate their peers, nurses and counselors on the proper management of HIV/AIDS. To date, 60 physicians have attended these local training sessions. The other companies involved in the ICCADD are **Agouron, Boehringer Ingelheim, Bristol-Myers Squibb, GlaxoSmithKline, Hoffman-La Roche, Eli Lilly, Novartis and Pfizer.**

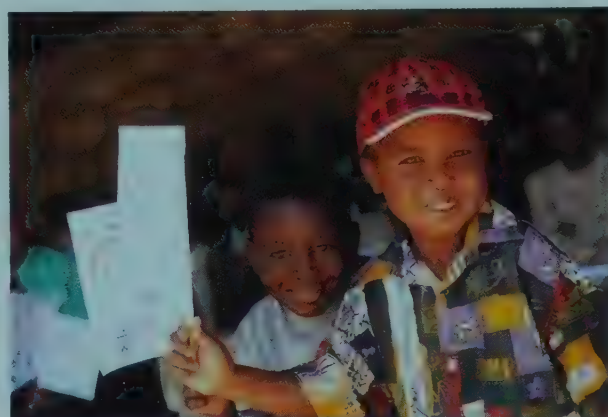
INTERNATIONAL AIDS VACCINE INITIATIVE (IAVI)

The International AIDS Vaccine Initiative (IAVI) was created in 1996 out of the recognition that the best long-term solution to the growing AIDS epidemic is a vaccine. As a global organization operating across borders to meet the challenges posed by the epidemic, IAVI is working to ensure the development of safe, effective, accessible and preventive HIV vaccines for use throughout the world. IAVI's work focuses on four areas:

- mobilizing support through advocacy and education (by identifying and filling other scientific gaps);

- accelerating scientific progress (by supporting promising vaccine development partnerships);
- encouraging industrial participation in AIDS vaccine development (by expanding public-private collaboration and creating incentives for private sector investment and participation in HIV vaccine development); and;
- assuring global access (by creating the policies necessary for getting the vaccines to all those who need it).

IAVI collaborates with developing countries, governments and international agencies that are dedicated to accelerating the development of a vaccine to halt the AIDS epidemic. Partners in the private sector include pharmaceutical companies such as **Aventis** (now part of the sanofi-aventis Group), **Boehringer Ingelheim, Bristol-Myers Squibb, Chiron, GlaxoSmithKline and Merck & Co., Inc.** Funding is provided by the Rockefeller Foundation, World Bank, USAID, the Bill & Melinda Gates Foundation, and other donors. For more information, please visit the IAVI web site at www.iavi.org/



PMTCT DONATIONS PROGRAM

In 2003 **Boehringer Ingelheim** and **Abbott Laboratories** announced a cooperative arrangement that will help prevent the transmission of HIV from mother to child in the developing world through their respective donation programmes. Through this arrangement, organizations can receive Abbott's Determine® HIV rapid tests and Viramune® (nevirapine), an antiretroviral drug developed by **Boehringer-Ingelheim**. In addition to providing tests and treatment, the two companies are committed to provide greater access to these donated products while making it easier for organizations to receive the donated products and encouraging the creation of new PMTCT programs in developing countries. Any organization that provides testing and treatment for PMTCT through a sound and sustainable program of care may request a donation of

Determine® HIV through Axios International who administers the application process for both programs. A common web site has also been established to simplify the process by which PMTCT programs obtain free HIV tests and Viramune® (nevirapine).

Abbott Laboratories, Boehringer Ingelheim and WHO recognize the potential for PMTCT sites to serve as a natural entry point for providing access to chronic treatment. Functioning PMTCT sites catalyse the improvement of infrastructure and access to health care in resource poor settings. This is primarily due to the multi-disciplinary approach required for a successful programme. Please visit the PMTCT Donations website at www.pmtctdonations.org for further information.

SECURE THE FUTURE®

In 1999 **Bristol-Myers Squibb** and the **Bristol-Myers Squibb Foundation** created SECURE THE FUTURE®, a multi-year initiative to support projects that help people in Africa affected by and infected with HIV/AIDS. Working side by side with government leadership and local organizations, SECURE THE FUTURE has focused its support on programs that build capacity of organizations; provide resources to leverage and support infrastructure; address contributing human development factors such as food security and poverty alleviation; and implement epidemiological and medical research. This breakthrough program has provided grants totaling almost \$100 million to more than 160 community and medical research programs in nine countries in southern and western Africa.

Since the inception of SECURE THE FUTURE, it was clear that programs are most successful when they help patients get through their entire days, not just the half hour they spend at a clinic but also the other 23 1/2 hours in the community. So while SECURE THE FUTURE grants help create infrastructure, the program goes well beyond bricks and mortar to ensure that patients receive needed community support to deal with issues like destigmatization, prevention, counseling, nutritional assistance and care for their families. In other words, the program is designed to help in a variety of ways — 24 hours a day, every day.

Recently SECURE THE FUTURE awarded six new community-based grants in five countries in southern Africa totaling \$30 million, leaving \$15 million to be awarded from the program's total \$115 million allocation.

The new grants fund community treatment and support sites that are being established in resource-poor settings where community-wide mobilization will occur. Each site will be supported with antiretrovirals and medical care. They will also have strong ties to the communities. At some sites, volunteers ("buddies") will encourage patients to comply with medicine regimens. Some sites will support food security and nutrition supplementation to help patients stay strong while on their therapies. The six grants will be implemented in Swaziland, Namibia, Lesotho, Botswana and South Africa.

SHARE

Abbott Laboratories, Agouron and Boehringer Ingelheim actively support SHARE, a multi-national program that teaches doctors, healthcare workers, resource planners and public health experts about prevention and management of HIV infection. The program principally focuses on the clinical care and prevention of HIV infection, and is primarily directed towards countries in economic transition. The aim of the program is to support the professional growth of health care providers in targeted countries, including physicians, nurses and other healthcare workers, as well as allied professionals such as health care resource planners and public health experts. The general aim of the program is to share the latest findings in HIV/AIDS research - by drawing on the extensive expertise of the members of the International AIDS Society - and to improve and enhance the care of people living with HIV/AIDS. Share acts in synergy with the pharmaceutical industry, local Public Health authorities, local communities, other existing educational programs, and with the activities of International Agencies, such as UNAIDS and the International AIDS Society (IAS).



STEP FORWARD... ...FOR THE WORLD'S CHILDREN

Abbott Laboratories and the **Abbott Laboratories Fund** are working to improve the lives of AIDS orphans and vulnerable children through Step Forward, its long-term, multimillion dollar philanthropic program. The program, launched in July 2000, has programs in Romania, India, Burkina Faso and Tanzania.

Step Forward's central feature is its focus on collaboration and community engagement. In partnership with national, regional and local governments and international and local NGOs, Step Forward develops and funds model community programs in these areas: improving local health care services and infrastructure, offering HIV counseling and testing, meeting basic community needs (such as providing clean water), and strengthening local schools. Visit www.stepforwardforchildren.org/home.htm to learn more about this initiative.

TANZANIA CARE

Tanzania Care is a partnership between the **Abbott Laboratories Fund** and the government of Tanzania to modernize the country's public health care infrastructure and improve services and access to care for people living with HIV/AIDS and other serious illnesses.

Implemented by Axios, an organization dedicated to improving health care in developing countries, Tanzania Care will cover multiple hospitals and laboratories in Tanzania; increase training of medical workers and laboratory personnel; and expand access to voluntary counseling and testing (VCT) for HIV. Tanzania Care will focus largely on renovating and modernizing Muhimbili National Hospital, Tanzania's largest public health institution, and restoring the hospital's role as the country's primary research, referral and teaching facility.

This multi-year, multi-million dollar initiative will more specifically include:

- Building a new outpatient clinic at the national hospital that includes a HIV day care center, teaching facilities, and counseling/psychosocial support facilities;
- Renovating and upgrading the national hospital's clinical laboratories;
- Creating management structure, department organization, budget process, planning cycle and financial controls within the national hospital;
- Training health care staff at the national hospital in HIV care and treatment; reviewing and updat-

ing the curriculum for physician, nursing and other paramedical staff at the Muhimbili Medical College;

- Upgrading information technology, security, waste management and health information systems throughout the national hospital, and;
- Increasing the capacity of Tanzania's 21 regional hospitals to provide VCT services as well as prophylaxis and treatment of opportunistic infections.

As part of Tanzania Care, **Abbott Laboratories** is providing the time and talents of employee volunteers. These specialized volunteers are lending technical support in the areas of engineering, waste management, health care management and information technology.

Tanzania Care is designed to directly address the need to build a sustainable and modern health care infrastructure that enhances HIV care, an issue that is a challenge for nearly all countries in Africa. Many countries, including Tanzania, need support for more specialized staff, modern medical curricula, adequate facilities and resources for patient care, which will allow them to more readily provide quality testing, counseling, treatment and services for people living with HIV/AIDS. Ultimately, the overarching goal of Tanzania Care is to create a public/private model that can be adapted by other companies and organizations working to fight AIDS in the developing world. For more information, please visit the website of the program at www.tanzaniacare.org



VIRAMUNE® DONATION PROGRAM

Boehringer Ingelheim's Viramune® Donation Programme was announced in July 2000 as a programme that offers the antiretroviral drug Viramune® free of charge to developing countries and has been designed to prevent Mother-To-Child-Transmission of HIV-1 (MTCT). There are about 120 countries eligible according to the World Bank list of developing and transient economies.

Boehringer Ingelheim donates Viramune® in accordance with the WHO Guidelines for Drug donations, free of charge, based on the expressed interest of governments, NGOs, charitable organisations or other healthcare providers with comprehensive Mother-to-Child-Transmission prevention programmes. The first deliveries in this program by Boehringer Ingelheim were made in late 2000 to the Republic of Congo (Brazzaville) and the Senegal, and since then more than 100 programmes in 50 countries have been approved to receive Viramune®. Most of them are countries in Sub-Saharan Africa, but also in Eastern Europe and in Asia, with many more programmes currently under review. China has recently welcomed a first delivery of 2000 doses. Furthermore, Russia and the Ukraine have introduced successful pilot sites. Also, several countries in Latin-America (for instance

Peru and Ecuador) have introduced Viramune® into their local MTCT Programmes.

Boehringer Ingelheim also works with both governmental and private organizations to develop training programs, locally and internationally. On the local level, co-operations have been strengthened with many key PMTCT implementers such as AXIOS, the ICN (International Council of Nurses), EGPAF (Elisabeth Glaser Pediatric AIDS Foundation) and UNICEF. For more information, please visit:
www.viramune-donation-program.org

MALARIA

Malaria is a life-threatening parasitic infection transmitted to humans through the bites of infected female Anopheles mosquitoes. The resulting disease in humans can be devastating. In the absence of immunity or drug treatment, death can occur within hours of noticeable symptoms. Annually, 300 million to 500 million cases occur resulting in more than a million deaths. 90% of these deaths occur in Africa, south of the Sahara and most of these victims are children under 5 years old. Pregnant women are also especially vulnerable. There are a number of possible approaches to combat malaria, including mosquito control; limiting the chances for human exposure to the infected mosquito; prevention through prophylactic use of antimalarial drugs and hopefully one day through use of vaccines.

ACCESS - Understanding and improving access to effective malaria treatment

Together with Tanzanian and Swiss partners, the **Novartis Foundation for Sustainable Development** aims to identify and analyze the main obstacles to effective malaria treatment and to address them by designing appropriate interventions in two Tanzanian districts. Future challenges of this project include motivating people to seek treatment at public health facilities in event of fever episodes, improving advice and treatment in private drug shops, and improving access for people spending months away from home during cultivation periods. Please visit the website of the Novartis Foundation for Sustainable Development at www.novartisfoundation.com

ARTEKIN® INTERNATIONAL DEVELOPMENT PARTNERSHIP

In March 2004 **Chongqing Holley Holding**, a Chinese pharmaceutical company, **Sigma-Tau**, an Italian pharmaceutical company, Medicines for Malaria Venture (MMV), a nonprofit organization and University of Oxford signed an agreement for the international development of Dihydroartemisinin-piperaquine (Artekin®). If successful, this antimalarial drug will be one of the few drugs in history developed primarily for a disease of the poor. Malaria mortality and morbidity are on the rise due to the growing problem of drug resistance and there is an urgent need to replenish the diminishing pipeline of effective and affordable medicines. The goal is not only to produce an effective drug, but also to make it available at a cost that's affordable for people living on less than a dollar a day. Representing a new generation of antimalarial drug, Artekin® is a fixed dose combination drug made up of dihydroartemisinin, a derivative of artemisinin, and piperaquine. Artemisinin is extracted from *Artemisia*

herb, a traditional medicine with a 2000-year history. It is especially potent against malaria as it acts very quickly without the side effects of many other antimalarials. In addition, there are no known cases of resistance to artemisinin so far. A combination drug further reduces the chances of resistance and improves its efficacy.

GSK AFRICAN MALARIA PARTNERSHIP

In 2003 the **GlaxoSmithKline** African Malaria Partnership disbursed the first community development grants in a \$1.5 million three-year initiative to combat malaria. The aim of this partnership is to develop effective malaria control behaviors in African communities and nearly two million people will be reached through the initiative's programs in seven African countries. Funded activities include developing a malaria education module as part of Freedom From Hunger's 'Credit with Education' programme that is expected to reach 500,000 people in Benin, Burkina Faso, Ghana, Mali and Togo; in the Sudan, advocacy for effective prevention and treatment, creation of malaria-control networks and partnerships, and public education in partnership with Plan International; and a Ugandan program in partnership with AMREF, Africare, Uganda Red Cross, CDFU and the Ugandan government for mothers and children under five years of age that uses community-based interventions, advocacy and multi-media approaches to promote prevention, detection and treatment. GlaxoSmithKline is also providing all of its antimalarial medicines at not for profit prices in all the Least Developed Countries and all the countries of sub-Saharan Africa. To learn more about the partnership, please visit: www.gsk.com/malaria/

IMPACT MALARIA

The **sanofi-aventis** Group, confirms its commitment to the fight against malaria with its program Impact Malaria. Its goal is to control this disease and reduce the high mortality rate still associated with it. The Group's involvement with this disease goes back many years, mainly in Africa, where it is backed up by recognized scientific expertise and its relationships with the different players of the health sector.

First of all, the Group helps to fight against malaria through its research and its active support for development.

The Group also puts at the disposal of the countries affected by this scourge a number of quinine derivatives - which remain the benchmark treatment for severe cases of malaria - in various presentations, as well as artemisinin derivatives. In response to the development of this disease, sanofi-aventis, is also developing new therapeutic strategies, new anti-malaria compounds as well as new pharmaceutical products. These therapeutic combinaisons based on artemisinin are recommended by the World Health Organization.

In order to intensify its fight against malaria, sanofi-aventis, sets up programs adapted to the drug-resistance profiles of the different countries. It also works in close collaboration with governments, major international institutions, universities and research institutes.

Special effort is furthermore being made to develop dedicated training and educational programs to inform those involved in health care delivery as well as the general public in malarial endemic areas. For instance, a special website has been created (www.impact-malaria.com) to inform about the disease, its transmission, its geographical distribution, its treatment and prevention and offering educational tools for children and an online library. For more information, please visit www.sanofi-aventis.com/

JPMW ALLIANCE (Japanese Pharmaceutical Companies, Ministry of Health, Labour and Welfare, and WHO)

In October 1999 a partnership between fourteen Japanese pharmaceutical companies (**Chugai, Daiichi, Daiichi-Suntory Dainippon, Eisai, Fujisawa, Meiji Seika, Mitsubishi Pharma, Otsuka, Sankyo, Shionogi, Sumitomo, Takeda and Yamanouchi**), the MHLW (Ministry of Health, Labour and Welfare), and the TDR

(The Special Programme for Research and Training in Tropical Diseases) of the WHO, will help to address the need for developing new antimalarial drugs. The aim of this public-private partnership, called the JPMW, is to screen chemical entities from the chemical libraries of the Japanese pharmaceutical companies for antimalarial activity. The project is being coordinated by the JPMW Coordination Center in Tokyo. Screening is currently being carried out at the Kitasato Institute, Tokyo, which is also testing some of the compounds from its own library. As of June 2004, 28,609 compounds have been screened in vitro, 372 of which show antimalarial activity. Follow-up in vivo studies have been carried out on 141 candidates - 101 from the pharmaceutical companies and 40 from the institute. Fourteen of these are now the focus of more detailed in vivo studies. Further development work on promising anti-malarials will then be carried out by TDR and the relevant pharmaceutical companies. Please visit www.jpma.or.jp for more information.

LAPDAP ANTIMALARIAL DRUG DEVELOPMENT

A joint research agreement was signed in March 2001 between WHO through its Special Program for Research and Training in Tropical Diseases (TDR) and **GlaxoSmithKline** to develop a new effective oral treatment for uncomplicated malaria, primarily for use in Sub-Saharan Africa for public health programs. The aim was to develop chlorproguanil-dapsone (LAPDAP) as a safe alternative to chloroquine and SP for treatment of malaria caused by the *Plasmodia falciparum* malaria parasite in Africa. The treatment received approval from the UK Regulatory Agency in July 2003, and GlaxoSmithKline and WHO are collaborating on operational research on public health and access issues related to the use of Lapdap in resource-poor settings, ahead of its anticipated introduction. Lapdap has now been approved in 21 African countries and if adopted by national malaria control programs, it will be made at not-for-profit preferential prices. In April 2004 GSK, WHO-TDR and the Medicines for Malaria Venture (MMV) announced the signing of a collaborative agreement, to develop a new fixed dose artemisinin combination therapy drug (ACT), combining chlorproguanil, dapsone and artesunate (CDA) for the treatment of malaria. This new CDA development project is supported by an initial grant from the UK Department of International Development.

MALARIA

opment (DFID). The development team is chaired by Professor Peter Winstanley of the University of Liverpool, one of the academic partners involved in the development of the drug, along with the Liverpool School of Tropical Medicine and the London School of Hygiene & Tropical Medicine.

The agreement states that if the development of CDA is successful as a result of this initiative, it will be made available at preferential prices to the public sector in malaria endemic countries, so as to maximize its availability to those in need. If targets are met the drug should be ready for regulatory submission in 2006.

MALARIA VACCINE INITIATIVE (MVI)

The Malaria Vaccine Initiative was created in 1999 to ensure that a malaria vaccine is developed. MVI was funded by a \$50 million grant from the Bill & Melinda Gates Foundation and the Initiative is administered by the Program for Appropriate Technology in Health (PATH), a U.S. not-for-profit organization. MVI's mission is to accelerate the development of malaria vaccines and ensure their availability and accessibility to the developing world. To accomplish the first part of its mission, MVI is identifying the most promising vaccines and technologies and implementing targeted partnerships with scientists, vaccinologists, and development projects. MVI works to link government, industry, and academia partners with field trial sites in malaria endemic countries as early as feasible in the development process.

To help ensure access to the eventual vaccine(s), MVI works with other vaccine programmes, such as (GAVI); academia, biotechnology firms and vaccine development partners, including **GlaxoSmithKline Biologicals**, the world's largest vaccine manufacturer, who have been working on a malaria vaccine for over 20 years, to explore commercialization, procurement, and delivery strategies that will maximize public health sector availability in the countries most affected by malaria. Each project may support process development, production, and/or clinical trials in malaria-endemic regions. MVI is guided by Technical Advisory Groups, a Strategic Advisory Council and PATH's board. Partners include malaria experts around the world, government agencies, academia, public and private research institutions, and vaccine producers.

In October 2004, encouraging results from the largest paediatric safety and efficacy clinical trial of GSK's malaria vaccine in Africa were published in

The Lancet. GSK Biologicals and PATH's Malaria Vaccine Initiative (MVI) co-sponsored the trial, which was approved by Mozambique's Ministry of Health. These findings represent a breakthrough in the science of malaria vaccines as it brings the world another step closer to a licensed vaccine. Due to the need for further studies, a licensed malaria vaccine is not expected to be available before 2010. For more information, visit www.malariavaccine.org/

MEDICINES for MALARIA VENTURE (MMV)

The Medicines for Malaria Venture (MMV), founded in 1999 as a public-private partnership, seeks to discover, develop and deliver new antimalarial drugs suitable for use in developing countries. MMV now manages the largest portfolio of malaria drug research in history with 21 projects in different developmental stages. Its objective is to develop one new antimalarial every 5 years with the first one registered before 2010. With a number of drugs in phase II and III clinical trials, it's likely that its goal will be reached well before the end of the decade.



Its 39 R&D partners include academic research institutes, biotech firms and pharmaceutical companies. Large pharmaceutical partners include **GlaxoSmithKline**, **Novartis**, **Bayer**, **Roche**, and **Ranbaxy**. Its annual budget is around \$25 million dollars and in-kind contributions from the industry partners total at least the mirror amount. Capital financing for drug discovery activities comes mostly from public sources and the industry contributions are primarily contributions in-kind, e.g., management expertise, access to chemical libraries, high throughput screening and data

handling. MMV's funding comes from various foundations, donor governments and corporations with the largest contribution from the Bill & Melinda Gates Foundation. The World Health Organization and the Roll Back Malaria Partnership also consider MMV an important partner in its fight to control and defeat malaria. The projects that are in clinical trials include chlorproguanil-dapsone-artesunate with GSK, Pediatric Coartem® with Novartis, Artemisone with Bayer. For more information, please visit the MMV web site, at www.mmv.org/



MULTILATERAL INITIATIVE on MALARIA (MIM)

A coalition of organizations and individuals established in 1997 with **GlaxoSmithKline** and coordinated by a Secretariat that rotates every few years among partner organizations. MIM's current secretariat is housed in the Karolinska Institute, sharing the leadership together with Stockholm University and the Swedish Institute of Infectious Disease Control. The objective of MIM is to strengthen and sustain, through collaborative research and training, the capability of malaria endemic countries in Africa to carry out research required to develop and improve tools for malaria control. MIM aims to raise international public awareness of the problem of malaria by addressing and coordinating efforts in scientific research against malaria in endemic countries, through promoting capacity building and facilitating global communication and collaboration and coordination to pledge that research findings are applied to malaria treatment and control and to ensure that research findings yield practical health benefits. For more information, please visit www.mim.su.se/

NOVARTIS COARTEM®

In May 2001, **Novartis** made a unique public-private collaboration agreement with the World Health Organization (WHO) in the fight against malaria. The essence of the agreement is that Novartis commits to make Coartem® available on a "not-for-profit" basis for distribution to public sector agencies of malaria-endemic developing countries. Through grants provided by the Global Fund For AIDS, Malaria and Tuberculosis, Novartis has equally undertaken to supply, under the aegis of WHO, Coartem® to public sector agencies. The partnership aims at establishing sustainable supply chains for distribution; improving treatment regimens in malaria-endemic countries; and monitoring systems for new malaria drugs in the developing world.

Novartis developed Coartem® with the Institute for Microbiology and Epidemiology in Beijing by combining a traditional Chinese plant-based remedy, artemether, with a synthetic substance, lumefantrine. The resulting oral, fixed-dose artemisinin-based combination therapy (ACT) is the fastest acting anti-malaria medicine – destroying parasites in 48 hours – with high documented cure rates.

In the South African province of KwaZulu-Natal, a pilot programme combining case management with Coartem, indoor house spraying and insecticide-treated bed nets resulted in a 95% decrease in malaria death, whilst malaria-related hospital admissions and outpatient visits decreased by 94%. Parasite prevalence in the province is now at an historic low, and KwaZulu-Natal continues to see annual decreases in the incidence of malaria. Other demonstrations of the company's commitment to good corporate citizenship have followed.

Zambia was the first country in sub-Saharan Africa to make a national policy change to Coartem® as first-line treatment in its malaria control programme and in 2003, the Central Board of Health received its first shipment of 2.1 million treatments and 3.4 million treatments will be delivered in 2004. Beyond providing the treatment at a not-for-profit price, Novartis also supports a capacity building programme to ensure optimal levels of patient access to the drug. The programme includes conducting operational research, raising community awareness and educating health-care workers.

In addition, in partnership with WHO's Tropical Disease Research (WHO-TDR) and the Government of Zambia, Novartis is implementing a pregnancy registry

MALARIA

to observe the safety and efficacy of ACT treatment in pregnant women. There is currently little rigorously acquired data available on their use to treat uncomplicated *P. falciparum* malaria in confirmed pregnancy. So, researchers will follow women who have been prescribed ACT in pregnancy as well as the newborns. Once underway, the Zambian pregnancy registry will be the only observational registry for ACT in the world.

Beyond this real-world study, Novartis is also supporting clinical research in pregnant women through an unrestricted grant to WHO-TDR. The tolerability and efficacy of Coartem® will be studied in the Shoklo Malaria Research Unit in Thailand.

Finally, Novartis and the WHO have also announced the "Coartem® and Malaria" international education programme to support the distinct packs of Coartem® that are to be made available for the public sector in order to improve compliance and therefore, response and cure rates of the treatment in less developed countries.

ROLL BACK MALARIA GLOBAL PARTNERSHIP (RBM)

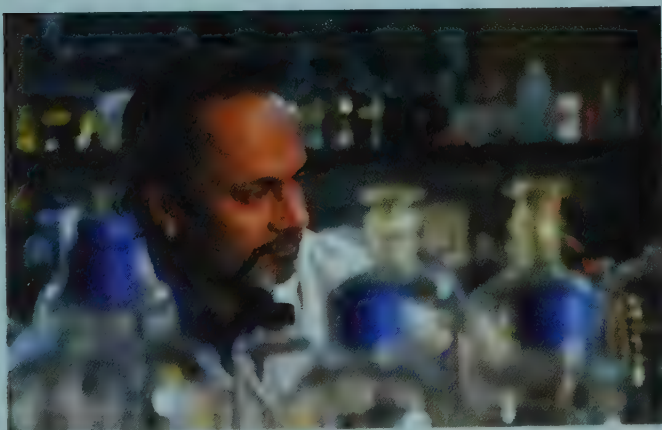
In October 1998, the International Federation of Pharmaceutical Manufacturers Associations (IFPMA) and the Wellcome Trust, launched the Roll Back Malaria Global Partnership. Hosted by a WHO Secretariat, it aims to provide global leadership, strategy, and overall coordinating mechanisms to reduce the global malaria burden by 50% by the year 2010 through interventions adapted to local needs and strengthening of the health sector. RBM seeks to strengthen health systems to ensure better delivery of health care, especially at district and community levels; ensure the proper and expanded use of insecticide-treated mosquito nets; ensure adequate access to basic healthcare and training of healthcare workers; encourage the development of simpler and more effective means of administering medicines, such as training of village health workers, mothers and drug sellers on early and appropriate treatment of malaria, especially for children; encourage the development of more effective and new anti-malaria drugs and vaccines. For more information, please visit www.rbm.who.int/

Tuberculosis is primarily a disease of the respiratory system, and is spread by coughing and sneezing. Each year approximately 2 million people die from this curable disease. The breakdown in health services, the spread of HIV/AIDS and the emergence of multidrug-resistant TB are contributing to the worsening impact of this disease. The WHO has estimated that between 2002 and 2020, approximately 1000 million people will be newly infected, over 150 million people will get sick, and 36 million will die of TB - if control is not further strengthened. In Eastern Europe and Africa, TB deaths are increasing after 40 years of decline. The largest concentration is in Southeast Asia.

BANGALORE RESEARCH INSTITUTE

Following the announcement in 2001 of a \$10 million capital investment in new laboratories at AstraZeneca's R&D facility in Bangalore, India, the new facility was completed and opened in June 2003. Work there is focused on finding a new treatment for tuberculosis, an infectious disease that is newly diagnosed in some two million people every year in India and in over eight million people worldwide. It is the single largest cause of adult death from infectious disease in the world. AstraZeneca is the only pharmaceutical company with a research programme in India totally dedicated to TB.

In addition to the \$10 million initial capital investment, the company is spending another \$10 million on state-of-the-art equipment and has committed a minimum of \$5 million a year from 2001 to 2005 to support the research programme. More than 60 scientists recruited from leading research institutions around the world currently work at the facility, and the company plans to recruit more international experts over the coming years.



The medicines now used to treat TB were developed more than forty years ago. Since that time there has been limited progress in developing new therapies against this increasing global health threat. The lack of new treatments has been compounded by the increasing ability of infectious organisms to evolve, adapt and develop resistance to existing drug therapies.

Backed by advanced technologies such as microbial genomics, AstraZeneca's scientists in Bangalore are focused on developing improved diagnostic tests and discovering new therapies that are more effective against persistent organisms and resistant bacteria that are increasing in incidence.

The Bangalore scientists also work closely with AstraZeneca's infection research centre in Boston, USA, and with external academic leaders in the field.



GLOBAL ALLIANCE for TB DRUG DEVELOPMENT (TB Alliance)

Industry, NGO's and foundations are working together with more than 30 partners around the world to accelerate the discovery and development of cost-effective new drugs. The TB Alliance draws on the best practices and resources of the public and private sectors. Its mission is to accelerate the discovery and development of cost-effective new anti-TB drugs, which achieve the following goals: to shorten or simplify treatment; to provide a more effective treatment of multidrug-resistant TB; and to improve the treatment of latent TB infection. The partnership functions as a virtual R&D organization. By outsourcing drug research and development projects, drug compounds are moved along the development line to achieve regulatory approval and bring them to market at affordable prices for those countries experiencing the highest burden from TB. In 2002 the TB Alliance in-licensed a

TUBERCULOSIS

promising new compound, PA-824 with potential for a new TB treatment, from Chiron and will be undertaking further pre-clinical studies shortly. Major TB Alliance partners include: **Novartis India**, the **Bristol-Myers Squibb Foundation**, the Association of British Pharmaceutical Industry and other pharmaceutical organizations, the Global Forum for Health Research and the Bill & Melinda Gates Foundation. Please visit www.tballiance.org for more information.

HELPING THE RED CROSS IN THE FIGHT AGAINST TB

Two years ago, **AstraZeneca** and the British Red Cross joined forces in the fight against tuberculosis - the single largest cause of adult death from infectious disease in the world. The company committed £300,000 over three years to helping the charity deliver a programme designed to help combat TB in Kyrgyzstan and Turkmenistan. Over 70% of the population in these countries live below the poverty line and the incidence of TB is among the highest in Central Asia.

The programme aims to combat the spread of TB and fight the stigma associated with the disease; to support the most vulnerable in society, and to build local capacity and develop a sustainable approach to fighting the problem.

The initiative centres around four core objectives:

- to increase the level of awareness of the disease within the community;
- to encourage people to seek early diagnosis if TB is suspected;
- to improve compliance to treatment when it has been diagnosed;
- to provide ongoing care and nutritional support to patients.

Information is distributed to homes, schools, factories and clinics about the preventative measures that can be taken against TB and the availability of free diagnosis and treatment. Working with government health ministers, community leaders and schools, specific groups such as schoolchildren and factory workers are also targeted through individual health education sessions. Particular attention is also given to such high-risk groups as former prisoners and the homeless. Specially trained Red Cross community health nurses play a key role in providing homecare and nutritional support (in the form of food parcels and hot meals) to TB patients.

By the end of 2003, over 50,000 adults and children had attended TB awareness sessions in Kyrgyzstan. Red Cross nurses in Turkmenistan referred 392 cases, of which 124 were diagnosed with TB. Of all newly detected cases in Dashoguz, Turkmenistan, 85% (204) have so far completed treatment. Over 3,000 family food parcels were distributed to patients (with an estimated use of 4 to 5 family members per parcel each month).

The project is co-ordinated through the International Federation of the Red Cross and Red Crescent societies and is also to be supported by the national Red Cross societies of the US, Sweden and Spain.

An important part of the programme is the development of best practice guidelines that can be used for wider dissemination within the region and elsewhere.

LILLY MDR-TB PARTNERSHIP

Working with the WHO and Doctors Without Borders, **Eli Lilly** is leading the Lilly MDR-TB partnership to address the expanding crisis of multi-drug resistant tuberculosis (MDR-TB). MDR-TB is a type of tuberculosis that often develops in patients who do not complete the proper treatment for TB and failure to contain MDR-TB could result in the creation of a new, even more deadly strain of the disease. The goal of this initiative is to train enough health personnel and increase the supply of critical drugs needed to treat MDR-TB to meet the treatment goal of 20,000 patients annually by 2010, as set by the WHO. Eli Lilly is for this purpose dealing with all aspects of the MDR-TB problem, from drug supply to treatment and surveillance to evaluation by for instance distributing two critical anti-TB drugs for treatment of MDR-TB at a fraction of production cost.

In 2002 Eli Lilly extended for two more years its commitment with the WHO, doubling the previous quantity of medicine supplied. Through the WHO Green Light Committee, Eli Lilly has been an active participant in the treatment of thousands of MDR-TB patients globally, including Peru, Russia and the Philippines. As MDR-TB continues to rise at an alarming rate, Eli Lilly is working with various partners to explore ways to further extend patient coverage.

NOVARTIS INSTITUTE FOR TROPICAL DISEASES - NITD

Based in Singapore, the **Novartis Institute for Tropical Diseases (NITD)** was set up as a Public-Private Partnership between Novartis and the Singapore Economic Development Board (EDB). NITD held its inaugural symposium in January 2003. The new \$122 million research center will focus exclusively on the discovery of innovative drugs for the treatment of diseases that are endemic to developing countries. Dengue fever and tuberculosis were collectively selected as the diseases on which to focus, with the possibility to expand to other disease areas in later years. In the recognition of the fact that there is an urgent need to find new medicines for diseases like TB that are ravaging developing countries, the NITD has set up a TB Research Unit. The goal of the TB Unit is to apply new genomics and bioinformatics technologies to develop novel treatments for multi-drug resistant TB. Any resulting drugs will be made available without profit in those developing countries where the disease is endemic.

Novartis and the Global Alliance for TB Drug Development (TB Alliance) are currently coordinating efforts at the NITD. Both parties are also pursuing a more concrete and expanded collaboration in the area of TB drug-discovery. NITD researchers plan to take advantage of the genome sequence of the *Mycobacterium tuberculosis*, to identify vulnerable parts of the organism that could be targeted by small molecules. Those small molecules can then be further refined to produce clinical drug candidates.

For more information about the Institute, please visit www.nitd.novartis.com

NOVARTIS TB DOTS DONATION

In December 2003, **Novartis** signed a Memorandum of Understanding with WHO committing itself to donate the WHO recommended best TB treatment for half a million patients over five years. This comprises the rifampicin-based fixed-dose combinations for the intensive and continuation phase of treatment. The drugs will be given to the Global Drug Facility (GDF) of the Stop TB Partnership for use in programmes supported by the Global Fund against AIDS, Tuberculosis and Malaria. Novartis will also provide the necessary funds for logistics and independent quality control, to be carried out in addition to the quality control of the Novartis group.

The drugs will be provided in blister packs within patient kits. Fixed-dose combinations (FDCs) offer significant advantages over loose drugs. They permit the simultaneous intake of several drugs thereby preventing monotherapy and reducing the risk of resistance. They also dramatically reduce the number of tablets patients need to take. FDCs also eliminate stock outs of any individual drug, simplify logistics and minimize prescription errors. The use of Rifampicin throughout the treatment regimen reduces the duration of treatment from eight to six months.

In addition to providing free treatment, the **Novartis Foundation for Sustainable Development** is working closely with health ministries to help develop innovative solutions to improve patient compliance with treatment as well as to de-stigmatize the disease – both major challenges in TB. Often patients cannot comply with treatment due to the costs of having to go to a health facility every day to take their treatment and the inevitable loss of wages. A patient-centered approach that gives patients a choice of how their treatment will be supervised is currently being developed and tested. The fear and stigma of TB, which has intensified in recent years due to its close association with HIV/AIDS, needs to be addressed.

STOP TB PARTNERSHIP

Established in 1998 and hosted by the World Health Organization (WHO), Stop TB is a partnership that aims to provide global leadership, strategy, and coordinating mechanisms. The Stop TB priorities are to expand, adapt, and improve strategies to control and eliminate TB in support of the World Health Assembly Targets set by 2005 (70% case-detection and 85% cure-rates), and the Millennium Development Goals. The mission is to ensure that every TB patient has access to TB treatment and cure, to protect vulnerable populations from TB and to reduce the social and economic toll that TB exerts on families, communities, and nations. The partnership develops advocacy and resource mobilization strategies in support of these priorities, and coordinates and 'brokers' resource flows.

Other partners in this program include the International Federation of Pharmaceutical Manufacturers Associations (IFPMA), WHO, **Eli Lilly**, **Wyeth** and **Médecins Sans Frontières**. For more information, please visit www.stoptb.org

TUBERCULOSIS

TB FREE

Together with the Nelson Mandela Foundation, **Aventis** (now part of the sanofi-aventis Group), established in March 2002, the TB Free program, a five-year, €15 million effort committed to increase the detection and treatment rates of tuberculosis in South Africa. The partnership is aiming to train volunteers to support patients' compliance during the 6-month treatment. For this purpose, the DOTS (Directly Observed Therapy Short-Course) strategy is being used, as it has been recommended internationally for TB control, ensuring efficient patient compliance. This action will contribute to increase the Tuberculosis cure rate by as much as 80 percent in South Africa. In each of the country's nine provinces, a TB Excellence Center is being built. The goal of TB Free is to have 1 million "DOTS supporters" trained at the end of the five-year period.



Partnerships listed under this section are dedicated to combat tropical diseases, affecting the poorest populations of the world. Whether they are parasitic, viral, bacterial, chronic or curable, these diseases burden the populations of tropical and sub-tropical regions around the world, thus occurring in resource-poor settings, where people have very limited access to basic health care services and sanitation. There is often a geographical overlap, with several of the tropical diseases being endemic in the same region.

Although not always fatal, many of these diseases are severely debilitating. River blindness and trachoma, for instance, are the world's leading causes of preventable blindness, incapacitating families and communities in endemic areas. Another example is lymphatic filariasis (or elephantiasis), which is one of the leading causes of permanent disability worldwide. For some infectious diseases, like in the case of dengue fever, no specific treatment is currently available and vector-control strategies have proven insufficient to counter the pandemic.

Disease	People at risk (in million)
Dengue Fever	2.5
Leprosy	1,600
Lymphatic Filariasis	1,000
Onchocerciasis	90
Sleeping Sickness	50
Trachoma	650

BAYER DENGUE FEVER HEALTH CAMPAIGN

Global health programs sponsored by **Bayer** are combating diseases and relieving suffering throughout the developing world. With the increase of reports on new dengue infections in various parts of the world, combating dengue fever has been one of many focuses of Bayer's humanitarian efforts. In Brazil, Ecuador, Paraguay and Thailand, Bayer has participated in school educational campaigns. The preventive campaign in Porto Feliz, Brazil - where Bayer is cooperating with health authorities to educate the population about the problem - involved nearly 6,000 school-children in this city of 40,000 people.

In Paraguay, between August 1999 and April 2000, more than 150,000 cases of dengue fever were recorded. With support from Bayer, the Paraguayan health ministry distributed educational materials in Asunción, including television and radio commercials, 10,000 posters, 25,000 leaflets and 50,000 stickers. In Central America Bayer volunteers have sprayed insecticides, donated by the company, in urban areas where the risk of transmission is high.

GLOBAL ALLIANCE to ELIMINATE LEPROSY (GAEL)

Leprosy, an ancient scourge, has afflicted every country in the world at some stage. Before the development of an effective cure, the only way society dealt with the disease was by isolating sufferers. Virtually every society cast leprosy sufferers out of their families and communities and isolated them in leprosaria or in segregated villages for fear of their spreading the dis-

ease. Since the early eighties, the face of leprosy has changed dramatically with the development of multidrug therapy (MDT). Two of the three drugs in MDT, the WHO recommended treatment, were developed by **Novartis**. MDT cures patients, interrupts the transmission of leprosy and prevents disabilities. To date over 13 million people have been cured of leprosy, and the prevalence rate has dropped by over 90% since 1985 from 21 per 10,000 inhabitants to less than 1 per 10,000 inhabitants.

In 1999, at the initiative of WHO the Global Alliance to Eliminate Leprosy was set up to ensure that a common strategy based on experience of past leprosy elimination efforts was adopted, intensively implemented and effectively monitored. The goal of GAEL is to eliminate leprosy as a public health problem from every country by the year 2005 by increasing the coverage of leprosy services and thereby detecting and curing all the remaining leprosy cases. GAEL includes WHO, governments of endemic countries, Novartis, the **Novartis Foundation for Sustainable Development**, the Nippon Foundation/Sasakawa Memorial Health Foundation, NGOs, DANIDA and the World Bank.

Since 2000, Novartis and the Novartis Foundation for Sustainable Development provide free multidrug therapy for all patients in the world through the WHO (valued at \$35 million until the end of 2005). The funds are also provided to cover all freight and handling costs to the designated port of entry, and independent quality control in addition to that carried out by the Novartis group. The introduction of patient packs has led to substantial investment costs by Novartis. During the period of the current donation,

TROPICAL DISEASES

Novartis, together with WHO, has developed advocacy material to help change the image of leprosy. The MDT donation has led to the cure of about 2.5 million patients so far, based on WHO estimates.

The Novartis Foundation has been actively involved in supporting field programmes together with local health ministries, WHO and NGOs since the mid eighties. It has often adopted unconventional approaches to leprosy and pioneered the use of social marketing in combating this disease. The underlying concepts of generating and meeting demand for leprosy treatment are now an integral part of the WHO leprosy elimination strategy. The Foundation has also made a significant contribution to simplifying the provision of disability prevention services in communities. Many of the approaches devised in the Foundation's Comprehensive Leprosy Care Project in India have now been incorporated in the disability care package of the government and of NGOs.



GLOBAL ALLIANCE to ELIMINATE LYMPHATIC FILARIASIS (GAELF)

The Global Alliance to Eliminate Lymphatic Filariasis was created with the aim to eliminate one of the world's leading causes of disability and disfigurement as a public health problem by the year 2020. One hundred and twenty million people in at least 80 countries of the world are infected with lymphatic

filarial parasites, and it is estimated that 1 billion (20% of the world's population) are at risk of acquiring infection. Initiated by the World Health Organization and **GlaxoSmithKline** in 1998, the Global Alliance has evolved into a global partnership between international organizations in the public and private sectors, academia and non-governmental organizations working in partnership with ministries of health in tropical countries where lymphatic filariasis (LF) is endemic.

Merck & Co., Inc. joined the Alliance in 1998 when it widened the scope of its Mectizan® Donation Program to include LF in African countries where river blindness and LF co-exist. The World Health Organization currently recommends that lymphatic filariasis be treated with a combination of either: albendazole (donated by GSK) plus DEC; Mectizan® (donated by Merck) plus albendazole. Treatment for people living in endemic areas is recommended once a year for five years to break the cycle of transmission.

In 2003 GSK donated 94 million treatments of albendazole to prevent transmission in 34 countries in the African, American, Eastern Mediterranean, Mekong, Indian Sub-continent and Pacific regions. Over the next 20 years GSK expects to donate up to 6 billion preventative albendazole treatments to any of the 80 endemic countries that are accepted into the program by the WHO. Merck donated 20 million treatments of Mectizan® to LF programs in 7 African countries and Yemen in 2003. Merck & Co., Inc., and GSK have also provided grants to support partners in research programs, coalition building, workshops and communications. Nearly 80 million people - 30 million of whom are children - have begun to be protected from LF. For further information, please visit the GAELF web site at www.filariasis.org/

GUINEA WORM ERADICATION PROGRAM

Established in 1986 and operating under the auspices of the Carter Center's Global 2000 Program, the Guinea Worm Eradication Program aims to rid future generations of guinea worm by the year 2005. This multilateral partnership brings together organizations like WHO, UNICEF, the CDC, the World Bank as well as national governments and the pharmaceutical industry in a program combining eradication efforts, training and research. To accelerate the eradication of guinea worm disease, the partners will:

- maintain a community-based surveillance system with monthly reporting of cases, supervision, and integration of surveillance for other major preventable diseases (where appropriate and feasible);
- target specific interventions (provision of safe water, health education, community mobilization, filter distribution, and treatment of selected water sources);
- maintain global and national dracunculiasis databases for monitoring of the epidemiological situation and map all endemic villages;
- sustain advocacy for eradication of the disease;
- certify dracunculiasis eradication country by country worldwide.

Johnson&Johnson has donated enough medical supplies, such as Tylenol®, forceps and gauze, to treat more than 3,000 villages in the endemic countries. Today, through the joint efforts of this initiative's many partners, the numbers of this disease have been reduced worldwide by 99 percent: from an estimated 3.5 million cases in 1986 to less than 35,000 reported cases in 2003. Today, it is the last 1 percent of the disease that is being fought.

INTERNATIONAL TRACHOMA INITIATIVE (ITI)

Pfizer has donated more than \$130 million in product donations and health education grants in its efforts with the Edna McConnell Clark Foundation, co-founders of the International Trachoma Initiative (ITI), to eliminate blinding trachoma, the world's leading cause of preventable blindness.

The ITI works by seeking to further expand the use of the SAFE strategy. The SAFE strategy is a community-based plan of action that emphasizes the medical, behavioral, and environmental changes, essential to the control of trachoma. The four action steps comprising SAFE are: surgery, antibiotic treatment (using the revolutionary single dose preparation Zithromax), face washing and access to clean water, strengthened by increased health education.

ITI now operates in nine countries, Ethiopia, Ghana, Mali, Morocco, Nepal, Niger, Sudan, Tanzania and in Vietnam. So far, the Initiative has achieved the following:

- Surgeries: more than 70,000 cases of blindness prevented;
- Antibiotic: over 5 million people rid of active infection;

- Face washing and Environment: over 12 million people reached with health messages;
- Results: 90% reduction in active disease in Morocco.

In fact, Morocco is on course to eliminate trachoma by 2005 and become the first ITI-supported country to do so. Pfizer is committed to broadening the scope of the trachoma programs already in place and will launch at least 10 new country programs. As part of the expansion, Pfizer expects to donate about 135 million more treatments of its drug Zithromax®, a 15-fold expansion. Pfizer commits to increase treatments from current eight million to 135 million over next five years, a 15-fold expansion. For more information, please visit the ITI website www.trachoma.org/

MERCK MECTIZAN® DONATION PROGRAM

The Merck MECTIZAN® Donation Program (MDP), was launched in 1987, when **Merck & Co., Inc.** announced that it would donate MECTIZAN® (ivermectin), its breakthrough medicine for the treatment of onchocerciasis (commonly known as "river blindness") to all who needed it for as long as necessary. A unique, multisectoral partnership was established with the agreement and cooperation of governments in countries where onchocerciasis is endemic, their ministries of health and other national and international stakeholders to ensure appropriate infrastructure, distribution and support.



2003 marked the 16th anniversary of the MDP for the treatment of river blindness. To date, Merck has donated over one billion Mectizan® tablets worldwide, reaching more than 40 million people a year in 34 countries in Africa, Latin America and Yemen, with more than 300 million cumulative treatments admin-

TROPICAL DISEASES

istered since 1987. In addition, more than 61,000 affected African communities manage the planning and distribution of MECTIZAN® through Community-Directed Treatment. This system is leading to the integration of other healthcare interventions. Community distributors, specifically trained to distribute MECTIZAN®, are identifying and playing a role in the treatment of other maladies, such as lymphatic filariasis and Vitamin A deficiency. Polio immunization, Guinea worm eradication, and the diagnosis of cataract and trachoma are also being linked to Community-Directed Treatment, a mechanism pioneered through MECTIZAN® distribution. For more information please visit www.mectizan.org

SINGAPORE DENGUE CONSORTIUM

The Singapore Dengue Consortium was founded in 2003. It consists of 6 organizations, including the **Novartis** Institute for Tropical Diseases (NITD). The aim of the consortium is to explore ways to better understand and manage dengue infection and ultimately minimize the incidence of dengue in Singapore.

The Dengue Consortium will provide a platform for different parties to participate and share current work on dengue. The NITD is contributing its state-of-the-art in drug discovery know-how to find new therapies for dengue hemorrhagic fever and shock while being fully complementary to the other members of the consortium. The first project on the drawing board is the dengue virus-sequencing project, which will provide information on the entire virus genome together with annotation of clinical data and patient history. This information will be valuable for surveillance as well as understanding the genetic variations of different serotypes. One long-term outcome may be to find genetic markers that predict the clinical severity of the disease.

In recent years, there has been an increased reporting of dengue incidence from various parts of the world. Presently, there is no known cure or vaccine for this disease. Please visit : www.nitd.novartis.com for more information.

SLEEPING SICKNESS PROGRAM (African Trypanosomiasis)

Considered all but conquered in the 1960s, sleeping sickness has reemerged in Africa with a vengeance - as hunger, war, absence of surveillance and igno-

rance have contributed to the spread of the blood-borne disease. **Aventis** (now part of the sanofi-aventis Group), **Bayer** and **Bristol-Myers Squibb** have partnered with WHO to combat this disease.

In May 2001 Aventis, committed \$25 million for five years (2001-2006) to work in close collaboration with WHO on a three-point strategy, including adequate drug supplies, disease surveillance and management, treatment and research.

The program has three elements:

- Donation of eflornithine, pentamidine and melarsoprol - from July 2001 to 15 April 2004, a total of more than 1.2 million vials were donated to WHO and delivered to Médecins sans Frontières (MSF), who is providing storage, distribution, and administration of the drugs donated, in accordance with WHO's directions, to national control programs and non-governmental organizations;
- Financial support for disease management and control programs, such as systematic screening of populations living in endemic areas and medical staff training;
- Financial support for research and development of new therapies.

By April 2004, Aventis, total financial support amounted \$6.75 million and has enabled WHO teams to start screening affected areas, training technicians and developing new treatments through the UNDP-World Bank-WHO Special Program for Research and Training in Tropical Diseases. Eight new off-road vehicles have put screening and treatment teams back in the field in Angola, Cameroon, Chad, Central African Republic, Congo-Brazzaville and the Democratic Republic of Congo.

In agreement with Aventis, Bristol-Myers Squibb has committed to fund the cost of one year's supply of the active ingredient for the medicine eflornithine. In addition, BMS pledged a cash donation to WHO of \$400 thousand over two years to support efforts in treating the disease.

In 2002 Bayer agreed to supply - at no cost and for an initial five-year period - as much of the sleeping sickness drug Germanin as the WHO determines is needed to eliminate the disease. Furthermore, Bayer is supporting studies of the use of Lampit, a drug originally used against Chagas' disease, to treat sleeping sickness.

VACCINE-PREVENTABLE DISEASES

Children are among the most vulnerable populations when exposed to the threat of various communicable diseases. Yet, diseases such as diphtheria, tetanus, pertussis, measles and polio, which are often referred to as 'childhood diseases', can be easily prevented by the use of vaccines. Also, for other diseases affecting children, such as tuberculosis, hepatitis B, Hib, yellow fever or respiratory infections, safe and effective vaccines exist. Current vaccination efforts save three million lives every year, but vaccine preventable diseases continue to be a major cause of death in developing countries. More than 30 million children still miss out on vaccination each year, and 2 to 3 million die annually from these easily preventable diseases.

GLOBAL ALLIANCE for VACCINES and IMMUNIZATION (GAVI)

This coalition of global leaders in immunization was formed in response to stagnating global immunization rates and a widening gap in vaccine access among children in developing countries. The Alliance, which includes industry partners (including the International Federation of Pharmaceutical Manufacturers Associations (IFPMA), **Aventis** (now part of the sanofi-aventis Group), **Berna Biotech**, **Chiron**, **Glaxo-SmithKline**, **Merck & Co., Inc.** and **Wyeth**), industrialized and developing country governments, UNICEF, WHO, the World Bank, foundations and NGOs, provides a mechanism for partners to collaborate more closely, agree upon common goals and strategies, and share a commitment to do more for immunization and do it better. A major outcome of the collaboration is the development of the Vaccine Fund, which provides financial support directly to low-income countries based upon applications to and recommendation of the GAVI Board.

As part of its contribution to GAVI, **Aventis**, sponsors a training program for 250 doctors in up to 11 African countries. These doctors will become head of immunization programs in their respective districts. The program is implemented by the French NGO, Association pour l'Aide à la médecine préventive (AMP), and was developed in partnership with the national governments of the recipient countries, the Universities of Cocody-Abidjan and Paris-Dauphine, and in collaboration with the WHO, UNICEF, the Vaccine Fund, and other partners working in Africa.

In support of the Pan American Health Organization's goal of eradicating measles in the Western Hemisphere, **Merck & Co., Inc.** has provided 1 million doses of MMR II (its mumps, measles, rubella vaccine) over a three-year period to Honduras. The company also is donating 5 million doses of its hepatitis B vac-

cine in support of the Global Alliance for Vaccines and Immunizations (GAVI).

Another example is **Chiron Vaccines**, which has contributed \$90,000 for disease burden study and surveillance.

Wyeth is another primary corporate participant in GAVI. Wyeth is donating 10 million doses of the Haemophilus influenzae type b (Hib) conjugate vaccine to immunize 3.3 million children. According to GAVI, seven countries now provide protection against Hib, one of the leading causes of infant mortality. For more information, please visit www.vaccinealliance.org

GLOBAL POLIO ERADICATION INITIATIVE

In January 2004 a new plan was unveiled to immunize 250 million children in the remaining polio-endemic countries to once and for all eradicate a disease that once paralyzed hundreds of thousands of children each year. Working in cooperation, the World-Health Organization (WHO), Rotary International, the Centers for Disease Control and Prevention (CDC), and United Nations Children's Fund (UNICEF), agreed to accelerate efforts targeted at eradicating polio.

At the end of 2002, **Aventis Pasteur**, Aventis' human vaccine group, announced that it would donate 30 million doses of the Oral Polio Vaccine (OPV) through 2005, to the Global Polio Eradication Initiative. This donation should cover the entire vaccine needs for National Immunization Days and outbreak control forecasted in African countries affected by armed conflicts (Angola, Liberia, Sierra Leone, South Sudan, Somalia). In fact, Aventis Pasteur is the longest-standing corporate partner in the Initiative and has donated 120 million OPV doses since 1997.

In 2002 **Wyeth** contributed \$1 million to the Global Polio Laboratory Network, a key component of the Global Polio Eradication Initiative. The laboratory network, which Wyeth helped establish several years

VACCINE-PREVENTABLE DISEASES

ago, is made up of three regional and 13 national laboratories that analyze polio cases and provide surveillance information for 44 African and three Eastern Mediterranean countries.

In Thane, India, **Bayer** donated enough polio vaccines to immunize 170'000 children, an initiative that helped the WHO program defeat polio in the region.

In 1996, **Chiron Vaccines** also joined the Global Polio Eradication Initiative. Between 1997 and 1998, the company provided more than 20 million doses of polio vaccine to the WHO and UNICEF. During the summer of 2002, Chiron announced a second donation of 9.5 million doses of Oral Polio Vaccine targeted at ensuring that the Initiative achieves its goal of polio eradication by 2005. This donation will fulfill Chiron's 1996 commitment to donate 30 million doses of polio vaccine for international vaccination campaigns. For more information, please visit the website of the program at www.polioeradication.org

INFLUENZA VACCINE SUPPLY INTERNATIONAL TASK FORCE

A specialized group within the International Federation of Pharmaceutical Manufacturers Associations (IFPMA), the Influenza Vaccine Supply international task force, has been created in February 2002 to assist business leaders in vaccine companies in making necessary decisions to ensure adequate capacity to produce and distribute influenza vaccine in interpandemic and pandemic years, as well as to assist health authorities policy makers in making decisions on vaccination recommendations and reimbursement, the level of vaccine use and vaccine delivery strategies.

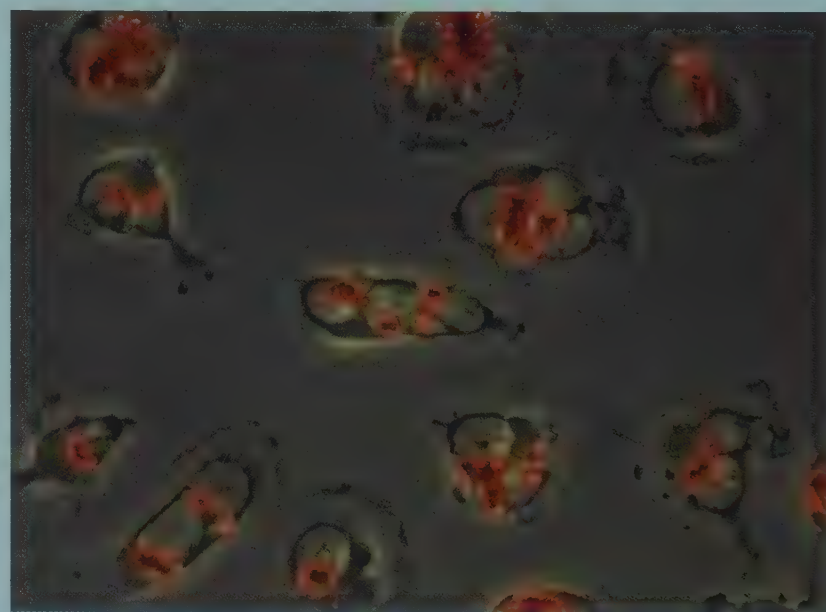
A total of 14 pharmaceutical companies involved in research, development and production of influenza vaccines, representing more than 90% of the world production, are putting together their efforts to ensure that in case of a pandemic, large quantities of a specific pandemic vaccine will be made available in the shortest period of time. Indeed, current worldwide production capacities are likely to be insufficient to meet the demand in case of a pandemic. The scientific, production and research (SPR) subgroup of the task force is actively working on the technical issues for developing, licensing and producing a pandemic vaccine in close collaboration with national and international agencies, including the World Health Organization (WHO), the European Medicines Agency (EMA) and the National Institute of Health (NIH) in the USA.

Meanwhile the Policy, Practices and Communication (PPC) sub-group has published a series of articles in the scientific journal *Vaccine*, has initiated an analysis of influenza vaccine distribution throughout the world and a large health economic study on influenza vaccination in healthy adults 50-65 years old, which should support the public health and societal value of influenza vaccination. Finally the IVS international task force will shortly issue a position paper on the industry perspective on pandemic preparedness.

Member companies are: **Aventis Pasteur, MSD, Baxter, Berna Biotech, Chiron, CSL, Denka Seiken, GSK, Chemo-Sero-Therapeutic Research (Kaketsuken), Kanonji Institute, Kitasato Institute, MedImmune, ID Biomedical, and Solvay.**

LEISHMANIASIS VACCINE INITIATIVE (LVI)

In 1994, the Infectious Disease Research Institute (IDRI), a U.S., tax-exempt not-for-profit scientific organization supported by public funds and Corixa Corporation, a research/development-based biotechnology and vaccine company, established a collaborative partnership to optimize the development of vaccines, therapeutics, and diagnostics against leishmaniasis and other diseases of the poor. In March 2000, IDRI announced receipt of a \$15 million grant from the Bill & Melinda Gates Foundation to fund IDRI's ongoing effort with Corixa to develop a vaccine to prevent leishmaniasis.



MERCK VACCINE NETWORK – AFRICA (MVN-A)

The Merck Vaccine Network – Africa (MVN-A), an initiative designed to contribute to improving the immunization infrastructure in Africa, was launched in 2003. Funded by the **Merck Company Foundation**, MVN-A is a multi-year initiative to establish a network of vaccination training centers at academic institutions in Kenya and Mali to provide a sustainable source of skilled health care workers in those countries and across the region. The Merck Company Foundation awarded two grants for a maximum of US \$200,000 per grant year, for up to four years. The collaboration in Kenya is between the Indiana University School of Medicine and Moi University Faculty of Health Sciences. The collaboration in Mali is between the Center for Vaccine Development at the University of Maryland School of Medicine and the Center for Vaccine Development – Mali at the Centre National d'Appui à la Lutte contre la Maladie.

The MVN-A program supports Merck's commitment to the Global Alliance for Vaccines & Immunizations (GAVI). Each collaboration will use training curricula based on educational materials developed by the World Health Organization (WHO) and partners of GAVI.

MVN-A will work with each of the Centers to ensure program consistency, sustainability, and integration with other GAVI and local/regional immunization initiatives. In subsequent years, MVN-A may support research into the burden and prevalence of vaccine-preventable diseases.

To learn more about the MVN-A, please visit www.merck.com/about/cr/mvna/home.html

PEDIATRIC DENGUE VACCINE INITIATIVE (PDVI)

In order to accelerate the development and introduction of a dengue vaccine that is appropriate, safe and accessible to poor children in endemic countries, the Pediatric Dengue Vaccine Initiative (PDVI) was established in 2001. Its aim is to raise awareness about the disease and to work with public and private partners in developed and developing countries. Some of the Initiative's goals include:

- Coordinate country surveys needed to better define the burden of dengue illness;
- Support R&D and enhance developing country science capacity;

- Prepare and launch a scientific blueprint charting the challenges and opportunities (biotechnology, new vaccine approaches) that must be met to achieve a safe, effective and affordable pediatric dengue vaccine.

No specific treatment is currently available and strategies focusing on vector-control have so far been insufficient to counter the pandemic. Dengue vaccines offer an impending solution to control this major global health problem and existing technologies have resulted in several robust dengue vaccine candidates, but many challenges remain. The consensus is that a safe, broadly protective dengue vaccine for children can be achieved in a matter of years by a focused, intense effort.

The PDVI headquarters are hosted by the International Vaccine Institute, located in Seoul (Korea). The Initiative is supported by governments of endemic countries, academic research centers in the US and South-East Asia and the pharmaceutical industry, including **Aventis** (now part of the sanofi-aventis Group), and **GlaxoSmithKline**.

ADDITIONAL HEALTH INITIATIVES

Building Healthier Societies Through Partnership – Examples of Individual Health Initiatives

(This list illustrates a selected range of individual company programs around the world.
It is not intended to include all such programs.)

ABBOTT LABORATORIES

- In the Democratic Republic of Congo and Kenya, through a partnership with Direct Relief International, Abbott donated products for healthcare settings.
- In Hong Kong, Abbott provided charitable contributions in health and welfare including cancer link program (providing regular health talks to patient groups), product donations and disease-specific education to assist with the SARS outbreak.
- In Uruguay, Abbott supports educational initiatives to raise HIV awareness.
- In Colombia and Ecuador, through a partnership with AmeriCares, Abbott donated hospital products, pharmaceuticals and nutritionals to support relief efforts related to earthquakes in both countries.

www.abbott.com

ASTRAZENECA

- AstraZeneca's product donations and patient assistance programmes make products available free of charge or at reduced prices. In 2003, the companies' expanded patient assistance programmes in the US contributed to a total spend of \$724 million in this area, at average wholesale price.
- In South Africa, teachers' perceptions of asthma are changing rapidly due to the National Schools Programme, sponsored by AstraZeneca. The programme runs with the sponsorship of AstraZeneca under the auspices of the National Asthma Education Programme (NAEP), a non-profit organisation dedicated to educating the general public about asthma. In less than a year, the Schools Programme has covered 20 schools in Durban, 20 in Cape Town and 9 in Johannesburg. The Orange Free State will soon be receiving their first letters of invitation to take part in the campaign. In every area teachers are invited to meet with chest physician or a paediatrician to learn the basic facts of the disease. Teachers also receive a booklet - Asthma at School - giving them all the key facts about the disease in a very simple and accessible language.

www.astrazeneca.com

AVENTIS – now part of the **sanofi-aventis Group**

- Besides combating sleeping sickness in African endemic countries with WHO and TB in South Africa with the Nelson Mandela Foundation, or contributing to the WHO polio eradication campaign with vaccines donations, Aventis, part of the sanofi-aventis group, supports a number of other projects in developing countries such as the creation of a healthcare center to treat leishmaniasis in Brazil, the creation of a network of schools for street children and dispensaries for ethnical minorities in Vietnam, the provision of clean water in villages of Burkina-Faso, Benin, Togo and Senegal coupled together with hygiene education programs for school children in these villages, etc.
- To help in the fight against Burkitt's lymphoma (a type of cancer primarily affecting children), the Aventis, Institute in Paris supports the French-African Pediatric Oncology Group, by supplying cytostatics (cell division inhibitors), antibiotics and painkillers.
- In Kyrgyzstan, satisfactory medical care is often lacking and healthcare delivery is extremely difficult in this mountainous country where more than 60 percent of the inhabitants of rural regions are living below the poverty line. Some 18,000 people are affected by diabetes in Kyrgyzstan and as humanitarian aid Aventis, has provided \$70,000 worth of insulin.
- Medical experts expect that the number of diabetes cases in Togo (West Africa) will triple from currently 60,000 to more than 180,000 in the next 25 years. In anticipation of this development, the German Pharma Health Fund (of which Aventis, is a member) in Togo is

ADDITIONAL HEALTH INITIATIVES

supporting a further training project on diabetes aimed at familiarizing doctors, nursing staff and patients with modern methods of diagnosis and therapy. This initiative is to be expanded to other developing countries.

- Aventis, also regularly provides medicine and vaccine donations for populations affected by natural catastrophes or other emergency situations.

www.aventis.com

BAYER

- Following the devastating earthquakes in India and El Salvador at the start of 2001, Bayer provided several million euros worth of medicines and other products, e.g. diagnostic appliances, agents to treat drinking water and household hygiene products, to reduce the risk of infection.
- In Malawi Bayer participated in a large-scale study of the treatment of mosquito nets that once again demonstrated their effectiveness in repelling mosquitoes. Between 1999 and 2001, Bayer donated 600,000 insecticide treatments for nets.

www.bayer.com

BRISTOL-MYERS SQUIBB

- Recent donations by Bristol-Myers Squibb and disaster relief efforts include cash and/or product donations for victims of flooding in the Czech Republic and Poland, severe cold storms in Peru, Hurricane Isadore in Louisiana and Mexico, and the terrorist attack in Bali.
- In 2002 the company began donating vitamins to a clinic for mothers and children in the Dominican Republic's capital city of Santo Domingo. Prepackaged disaster relief and medical mission packs were shipped for use throughout the developing world. The company supports primary health care programs in Mexico, Africa, Central and South America and central Asia and disease management programs in Haiti and Brazil.
- In Hungary more than 120,000 cancer patients will gain access to psychological counseling for themselves and their families as part of a partnership between the Bristol-Myers Squibb Foundation and the Hungarian Hospice Foundation.
- In Afghanistan, the Bristol-Myers Squibb Foundation partnered with the International Medical Corps to develop a pilot, 16-month, community-based mental health program for women in the area. The "human spirit" has been challenged there by years of war, internal conflict and displacement. The program will provide training to female health professionals who will offer counseling, treatment and educational services. During the pilot it is expected that 25,000 women and girls will receive treatment and nearly 7,000 counseling sessions will be conducted. In addition, trainers will be trained, new clinics established and a model for other areas created.
- Along with the China Liver Foundation, Bristol-Myers Squibb supports the Hepatitis B Rural Vaccination Education Project, which serves rural populations in six impoverished counties in the Shan'Xi and Gansu provinces of China. The three central strategies of the two-year program are to educate parents, guardians, local health workers and government officials about the disease, to drive widespread vaccination according to best practices and to build a rural vaccination-education model that can be replicated throughout China.

www.bms.com

ELI LILLY

- Eli Lilly & Company donates medical relief to people in more than 65 countries each year for both emergencies and ongoing programs, and contributes financial assistance through numerous organizations to improve public health around the globe.
- In the past several years, the company and the Lilly Foundation have provided over \$100 million in product donations and cash grants to numerous developing countries.
- In China, Lilly contributed \$800,000 to fund a partnership with Project HOPE (in the China Diabetes Project) that creates sustainable diabetes prevention and control programs throughout the country.
- In South Africa, Lilly funded the Center for Diabetes and Endocrinology to increase public education programs on diabetes and build a primary care clinic in 2002.

www.lilly.com

ADDITIONAL HEALTH INITIATIVES

GLAXOSMITHKLINE

- In October 2004 a proof-of-concept study was published in *The Lancet* in which, researchers reported that GlaxoSmithKline (GSK) Biologicals' RTS,S/AS02A malaria vaccine candidate protected a significant percentage of children against uncomplicated malaria, infection, and even severe forms of the disease for at least six months. This largest malaria vaccine efficacy trial ever conducted in Africa also re-confirmed the vaccine's safety in one-to-four year old children. Further efficacy studies will be needed before consideration for licensure and a licensed malaria vaccine is not expected to be available before 2010.
- In 2003, GSK Biologicals launched a new meningitis vaccine developed especially for Africa, in collaboration with the WHO.
- GSK is developing a vaccine to combat rotavirus infection worldwide. This vaccine is being developed in the developing world, where the medical need is the greatest, and GSK intends to launch it there first before the end of 2004 and first registration was received in Mexico in July 2004. In order to make the vaccine rapidly available, particularly in Africa and Asia, the company has engaged in a partnership with a number of public health institutions in both the developed and developing world to undertake accelerated development in those regions.
- In January 2004, GSK Bio announced the start of a Phase I clinical trial designed to evaluate the safety and immunogenicity of a novel, proprietary prophylactic vaccine being developed to induce protection against tuberculosis. The trial is the first time that this novel TB vaccine will be tested in man. The vaccine is developed in collaboration with Corixa.
- In 2003, GSK extended the voluntary licence granted to Aspen Pharmacare, sub-Saharan Africa's largest generics company, for the manufacture and sale of the ARVs *Combivir*, *Epivir* and *Retrovir*. The licence, which was originally granted in October 2001, previously was limited to only the public sector in South Africa and Zimbabwe. GSK has now extended the licence to cover both the public and private sectors across all of sub-Saharan Africa. In June and in August 2004, GSK granted licences to Thembalami Pharmaceuticals (Pty) Limited and Feza Pharmaceuticals both of South Africa, on similar terms to the extended licence granted to Aspen. And in September 2004 it granted a licence to Cosmos Pharmaceuticals in Kenya, covering East Africa.
- A dedicated group, based in the UK and Spain, has been created within GSK's pharmaceutical R&D organisation to ensure a focus on diseases of the developing world (DDW). For this group, drug development projects are prioritised primarily on their socio-economic and public health benefits rather than their commercial returns. This group works closely with a number of public-private partnerships. For example, GSK's pyridone project was declared Project of the Year by the Medicines for Malaria Venture in June 2004. The Pyridone project is one of four projects in the GSK/MMV 'mini-portfolio' research collaboration (agreed in June 2003) which is investigating a number of new compounds with promising antimalarial activities.
- In conjunction with other partners, GSK continues to support 27 clinical trials in developing countries, including 20 in Africa. The purpose of these trials is to assess the use of ARVs for treatment and prevention, including mother-to-child transmission, in resource poor settings. In total some 16,500 patients form, or will form, part of these HIV collaborative studies in these regions.
- GSK is working with Yunnan Provincial Health Bureau in Kunming and the Aaron Diamond AIDS Research Centre (ADARC) on the largest HIV clinical study in China to date. GSK will provide the *Trizivir* tablets necessary for the three-year study.

www.gsk.com

JOHNSON & JOHNSON

- Since 1998 Johnson & Johnson has partnered with Save the Children in efforts to educate children and their families in the Philippines, Vietnam and Thailand about child development, health and nutrition. The partnership's first project involved integrating personal, community and environmental hygiene instruction into school curricula in Thailand.
- Disaster relief continues to be a focal point. In 2002 product donations and financial assistance were provided to flood victims in the Czech Republic and earthquake victims in Afghanistan and India. The company made a commitment to donate \$10 million in phar-

ADDITIONAL HEALTH INITIATIVES

maceutical and personal care products to Direct Relief International to address urgent medical needs in Afghanistan and Pakistan.

- Johnson & Johnson and its affiliate Janssen-Cilag Brazil support Healthy Children, Healthy Futures, a treatment and education program established by the non-profit International Medical Services for Health (INMED), through grants and donations of Pantelmin® (mebendazol), an antiparasitic medication produced by Janssen-Cilag. The program has eliminated the threat of intestinal parasites in children and prevented re-infections by educating children, their families and communities regarding hygiene, sanitation and nutrition.

www.jnj.com

MERCK & CO., INC.

- Since 1998, Merck & Co., Inc. has donated medicines and vaccines through its Medical Outreach Program to a select group of organizations throughout the developing world. In 2003, Merck donated \$69 million in pharmaceuticals and vaccines for use in Latin America, Eastern Europe, Africa, Asia and the Caribbean. The total value of medicine donations to the developing world in 2003 was \$396 million.
- Since 1997 the Romanian government and Merck & Co., Inc. have worked together to increase access to treatment for thousands of children and adults living with HIV/AIDS in Romania. Merck & Co., Inc. has supported the implementation of the government's national AIDS strategy at every stage, including: support for the printing/distribution of the country's first national treatment guidelines, financial support to help create a national AIDS database and a \$1 million donation in 1999 to the Romanian National AIDS Committee to establish a network of seven regional AIDS treatment centers.
- In 2002, the International Council of Nurses (ICN), Merck & Co., Inc and Elsevier Science, the world's largest publisher of nursing books, formed a partnership to provide much-needed, quality health care information to nurses in nine African countries, including Botswana, Kenya, Zimbabwe, Ghana, Tanzania, Swaziland, Ethiopia, Somalia and Zambia. More than 80 mobile libraries, each comprising 91 specially selected books, bring up-to-date information on family and community health, disease prevention, health promotion and health services training to nurses who have limited access to reference books or expert advice. The libraries, which are packed into specially designed transportable trunks resistant to moisture, insects, and damage, are aimed at reaching remote locations. Altogether, the libraries have reached 83 rural communities and helped to improve the quality of care for tens of thousands of people.

www.merck.com

NOVARTIS

- For its employees and their families in the developing world, Novartis has established a comprehensive program of medical services that includes free or heavily subsidized facilities for diagnosis, treatment, and psychosocial care of workers with HIV/AIDS or other poverty-related diseases such as TB or malaria.
- In Southern and East Africa, the Novartis Foundation, in collaboration with *terre des hommes* Switzerland and The Salvation Army, supports different initiatives to improve AIDS-orphans' livelihood and future prospects through individual counselling to help them cope with their situation, capacity building of teachers, social workers and other care-givers as well as social and economic empowerment (skills development, access to credit and income generating activities).
- In Mali, the Novartis Foundation, together with the Ministries of Health and Social Development, has initiated the setting up of a mutual health insurance scheme to improve access for rural populations. The principle of collective provisions makes it possible to save for health at a time when more resources are available and at the same time to pool the resources of several people. In order to make the mutual health insurance scheme and its services attractive, the pilot project also improves the supply and quality of clinical care. Finally, the project contains a preventive component which should allow households - in conjunction with the mutual health

ADDITIONAL HEALTH INITIATIVES

insurance scheme - to reduce health care costs and thus those of the mutual health insurance scheme.

- In order to strengthen human resource development in the health sector in Tanzania, the Novartis Foundation for Sustainable Development and its partners are currently renovating and upgrading an Assistant Medical Officer Training Centre (buildings, training equipment, new specialized staff, etc). Assistant Medical Officers are a priority cadre for the Ministry of Health as they enhance the quality of essential primary health care services, especially at the district level. Thus an adequate teaching and learning environment will contribute substantially to improved medical expertise, which in turn is needed to improve the overall health situation of the population, especially in rural areas.
- In Sri Lanka, the Novartis Foundation supports the efforts of the *Sarvodaya Shramadana Movement* that is active in over 12,000 villages, applying a holistic and integrated approach to rural village development. In order to empower these communities on the basis of Buddhist principles, *Sarvodaya* has identified ten basic needs. Those ten elements include a clean environment (e.g. sewage and drainage system), adequate provision of clean drinking water, balanced nutrition and simple housing. Means to fulfill these basic needs are community activities to build the necessary infrastructure as well as training and education in nutrition and reproductive health for the younger generations.
- Novartis donates intraocular lenses to NGOs for cataract surgery for patients with inadequate means in developing countries.

www.novartis.com

PFIZER

- Through its Global Health Fellows Program, Pfizer gives its employees the opportunity to volunteer for up to 6 months with non-governmental organizations, working to fight AIDS, malaria and TB in developing countries. Since the pilot program was initiated in 2003, Pfizer has deployed 31 Global Health Fellows, including physicians, epidemiologists, nurses, educators, and business consultants to the field. Pfizer funds the transportation, lodging, and other expenses of Fellows, while continuing to pay their salaries and preserving their normal jobs. An additional 15 fellows are expected to be selected by the end of 2004.
- Since 2002, the Pfizer Foundation has awarded \$5 million in grants to support 28 organizations working in Africa, Asia, the Caribbean, and Latin America on HIV/AIDS prevention, care, and treatment. The Pfizer Foundation's International HIV/AIDS Initiative supports training and capacity-building for health care providers in countries hit hardest by the HIV/AIDS pandemic. Grants have funded peer education and home-based care services in Ghana, Kenya, Uganda, and Zimbabwe; a contest for young people in West Africa to write screenplays addressing issues related to HIV/AIDS; and university-based programs to change sexual behavior.

www.pfizerphilanthropy.com

ROCHE

- South Africa's mobile health clinic on rail, the Phelophepa Health Care Train, provides rural areas with primary care services. As sole sponsor, Roche fully underwrites its operation, staffing and maintenance. The clinic mainly offers health education, but it also screens patients and treats minor ailments. Special attention is given to mother and baby care and nutrition. Roche was also the Phelophepa's first corporate sponsor. The train has 16 coaches and 14 staff plus 40 student interns. The Health Care Train has now launched two new services, cancer screening and diabetes prevention, as a result of funding from Roche. If cancer or diabetes is detected, the patient is referred to local healthcare services. To date, the train has reached 7 million people and provided free health, dental, eye and mental care, training and education since 1994.

www.roche.com

ADDITIONAL HEALTH INITIATIVES

SCHERING-PLOUGH

- Schering-Plough supports public health education and medical community development and donates medicines to a variety of organizations around the world. It provides free medical products in Central and South America, India, Egypt, the Philippines, Romania, Russia and other countries. Medical community development support includes a prison conditions program in South Africa, diagnostic support to institutions in India for hepatitis, screening for rectal cancer in the Philippines and a variety of medical scholarship grants.

www.sch-plough.com

SCHERING AG

- Information and education are vital to effective contraception. With a \$2 million contribution, Schering AG Germany created CELSAM (Centro Latin-American Salud y Mujer) in 1999 to increase awareness of women's reproductive health issues in Latin America. Through radio ads, training programs for schools and universities, telephone hotlines and mobile stands on the street, detailed information on reproductive health was distributed in every country in Latin America. For example, in Guatemala, CELSAM and an affiliate of IPPF developed a campaign that encourages dialogue among teens about responsible sexual behavior. Information booths were set up in Guatemala City's popular shopping malls during the spring of 2001, and teenagers with demonstrated leadership skills were trained to answer questions, discuss responsible sexual behavior and distribute materials.

www.schering.de/eng/

WYETH

- In 2002 a WHO study involving 40,000 South African children showed that a new pneumococcal vaccine developed by Wyeth could save the lives of 500,000 children yearly in poor countries. Until now, no vaccine was available to protect against pneumonia, the leading cause of death of children worldwide, killing about 4 million per year. The vaccine reduced the incidence of pneumonia by more than 20 percent overall. It also reduced the incidence of invasive pneumococcal disease by more than 80 percent in children not infected with HIV and more than 50 percent in those with HIV. Also participating in the study was the South African Medical Research Council.
- Wyeth is also helping fund the provision of the newly developed pneumococcal conjugate vaccine for a five-year clinical trial in the Gambia, as part of one of the largest clinical trials of its kind in a developing country. The Medical Research Council (U.K.) is conducting this study in cooperation with the Gates Foundation, the National Institutes of Health (U.S.), U.S. Agency for International Development (USAID), the WHO and others.

www.wyeth.com

The International Federation of Pharmaceutical Manufacturers Associations (IFPMA) is a non profit, non-governmental organization (NGO) representing more than 60 national industry organizations from both developed and developing countries. Member companies of the IFPMA are the major global research-based pharmaceutical and vaccine companies.



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